

REMARKS

GENERALLY

This current Reply is responsive to a current and Final Office Action dated (mailed) 08/07/2006. In this current Office Action, pending claims 1-4, 6-14, and 16-32 were examined, and all pending claims were rejected.

No claims are canceled or added by this Reply. Hence, claims 1-4, 6-14, and 16-32 continue to be presented for examination.

OFFICE ACTION REJECTION(S)

The current Office Action rejected claims 1-4, 6-14, and 16-32 under 35 U.S.C. § 103(a).

Specifically, the current Office Action reads (in pertinent parts) at paragraphs #5 and #6:

Claims 1-3, 6-14, and 19-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Price et al. (hereinafter "Price"), "Linking By Inking: Trailblazing in a Paper-like Hypertext", HyperText 98, Pittsburgh, PA, copyright ACM 1998, p. 30-39, in view of Grefenstette et al. (hereinafter "Grefenstette"), U.S. Patent No. 6,778,979 B2, issued August 2004.

Claims 4 and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Price in view of Grefenstette as applied to claims 1-3,6-14.

1 and 19-32 above, and further in view of Haveliwala et al. (hereinafter
2 "Haveliwala"), "Evaluating Strategies for Similarity Search on the Web",
3 WWW2002, May 2002, p. 432-442.

6 ARGUMENT(S) WITH RESPECT TO 35 U.S.C. § 103(a) REJECTIONS

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8 With respect to claim 1, for example, the current Office Action appears to
9 rely on Grefenstette to reject the claimed "history of search terms". This portion of
10 the rejection is located primarily on pages 3 and 4. It reads, in pertinent part:

11 While Price does not explicitly teach that collecting the context data
12 comprises deriving at least two search terms, comparing the search terms to a
13 history of search terms, and weighting each of the search terms according to
14 whether a particular search term is included in the history, a higher weight being
15 assigned to a search term that is included in the history, Grefenstette teaches a
16 method of automatically querying and extracting data from a document to search
17 for related content (col. 3, l. 1-34). Grefenstette teaches a method of assigning a
18 personality to a document, where the personality contains document service
19 requests such as automated searches based on entities, i.e., words, in the
20 document (col. 10, l. 18-col. 11, l. 6). Grefenstette teaches extracting the entity
21 words based on relevance and storing them in a database. Grefenstette teaches
22 several methods of deriving, comparing and weighting search terms based on
23 inclusion in a history of search terms. Grefenstette teaches a method of
24 determining a list of interesting concepts to the user by using frequently
25 followed links, or information from a user's interaction history from entity, i.e.,
word browsing patterns (col. 32, l. 59-col. 33, l. 14; col. 30, l. 61-col. 32, l. 4).
Grefenstette teaches an alternative embodiment with a method of creating a
search history of derived search terms and deriving search terms from a next
accessed document, comparing the search terms to the history of search terms,
and weighting the terms for relevance based on whether the term is in the history
(col. 35, l. 10-col. 36, l. 56).

The above-quoted portion of the current Office Action reads, "Grefenstette
teaches an alternative embodiment with a method of creating a search history of
derived search terms and deriving search terms from a next accessed document,

1 comparing the search terms to the history of search terms, and weighting the terms
2 for relevance based on whether the term is in the history.”

3 It is respectfully submitted that “search history of derived search terms” (or
4 even “search history”) does not appear within the cited portions of Grefenstette. It
5 is also unclear to Applicants’ representative what aspect or aspects of Grefenstette
6 can be considered to correspond to “search history of derived search terms”.
7 Consequently, it is respectfully submitted that the comparing and weighting are
8 likewise not taught by Grefenstette et al.

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10 The following is a sampling of history-related terminology discovered by
11 Applicants’ representative in Grefenstette:

12 In one variation, the e-learning personality may also include a service
13 that tracks the user's past action (or access a user profile) to provide new
14 information when the same entity is linked to other documents.
(Grefenstette et al.; Column 31, Lines 33-36)

15 Whether to link or retrieve and insert content in a meta-document may
16 be specified for each personality or it may be performed automatically if
17 specified at 2724 in FIG. 27 or at 1226 in FIG. 12. Determining whether to link
18 or insert content automatically is performed using information from a user's past
19 history of interaction with the meta-document server 200. If specified to
20 automatically link or insert content to a specific personality at 2724 or as a
21 property of a personality at 1226, then the decision whether to insert information
as links or content will depend on whether the information is inside or outside a
user's interaction history. If outside a user's interaction history, then links are
inserted; otherwise, if inside the user's interaction history, the content is retrieved
and inserted into a meta-document.

22 A user's interaction history can be specified using a history of links
accessed by the user and/or a list of interesting concepts to the user. A list of
23 interesting concepts to the user can be determined using for example frequently
followed links or from a user profile developed by recording email history or
using a recommender system such as Knowledge Pump developed by Xerox
Corporation. In this mode of operation, information from a user's interaction
history from entity browsing patterns is used to determine whether to enrich
24 document content.

1 (Grefenstette et al.; Column 32, Line 59 to Column 33, Line 15)

2 At 2904, the accessed document is enriched with entities in an
3 interaction history. The creation of the interaction history is described below.
4 The interaction history associates each entity therein with information that
5 identifies a link identifying a location of a document for which the entry was
6 created. This may take the form of a link to which it refers, or if no markup, then
7 the document from which it originates. In addition, the interaction history,
includes: the purpose for which the document was accessed (e.g., print, store,
email, etc.), the time at which the document was accessed, the POS of the entity,
the entity type (e.g., personality entity type), and the number of times and the last
time the document was visited.

8 (Grefenstette et al.; Column 35, Lines 21-33)

9 Alternatively, that which is displayed to the user is filtered to identify
10 those most relevant if more than one entry in the interaction history is provided
11 for any one entity. Relevant results can be determined by measuring utility of an
12 entry as described in section D.3.2 above for entities. Others entries can be
13 accessed by the user by requesting additional enrichment results. In another
embodiment, a similar result is achieved by displaying only those results that are
filtered.

14 (Grefenstette et al.; Column 35, Lines 45-53)

15 The organization for a user of enrichment information when more than
one entry exists in the interaction history for the same entity can be performed
16 using one or a combination of more than one of the following ranking heuristics
(i.e., ranking techniques): (a) order information by the most recent time that the
17 document containing the entity was last accessed; (b) order information based on
the size of the document to which the markup refers; (c) order information based
18 on whether the document to which the entity refers is an authority or a reference
(i.e., hub) as described by Kleinber in "Authoritative Sources In A Hyperlinked
19 Environment," IBM Technical Report RJ 10076, May 1997; (d) order
information using a similarity metric to identify the document to which the
markup refers and the accessed document; and (e) a ranked list based on actions
20 to the document to which the markup refers. In one embodiment, an equal weight
is assigned to each action. Alternatively, higher weights are assigned to certain
actions that are deemed important (e.g., printing or recommending). In addition,
21 the ranked information can be displayed in the context of original content. For
example, the ranked information can include the closest one hundred words
22 surrounding the ranked information.

23 (Grefenstette et al.; Column 36, Lines 1-23)

1 Documents used to markup the document as determined by the meta-
2 document server can also be examined for markup to update the interaction
3 history. Markup coming from the meta-document server may receive a low
4 weight that is used during ranking.

5 (Grefenstette et al.; Column 36, Lines 45-49)

6 It is respectfully submitted that one of the above-quoted portions of
7 Grefenstette appear to teach a history of search terms or a search history of
8 previously-used keywords or anything reasonably similar thereto.

9 Moreover, although the current Office Action does not appear to cite
10 significantly to FIGS. 30 and 33 of Grefenstette, these aspects seem to relate to the
11 “interaction history” of Grefenstette. Specifically, “FIG. 30 is a flow diagram for
12 creating and updating an interaction history that are performed at act 2912 in FIG.
13 29;” and “FIG. 33 illustrates an interaction history;”. A review of these two
14 figures and their associated text at Columns 36-38 also fails to reveal any teaching
15 in Grefenstette that is relevant to the claimed “history of search terms”.

16 It is therefore respectfully submitted that Grefenstette et al., either alone or
17 in combination with any art of record (including Price et al.), does not render the
18 claimed “history of search terms” obvious, especially in conjunction with the other
19 elements of claim 1. For example, claim 1 includes the additional element(s) of
20 “weighting each of the search terms according to whether a particular search term
21 is included in the history of search terms, a higher weight being assigned to a
22 search term that is included in the history of search terms”. It is respectfully
23 submitted that the art of record also fails to render obvious these additional
24 elements.

1 Independent claims 14 and 23 have been further amended to reflect that the
2 keywords are search-related keywords. Specifically, claim 14 has been amended
3 to indicate that “the historical keywords [...] were previously used in the system in
4 at least one query for one or more searches” and claim 23 has been amended to
5 indicate that the “keyword history list includes previously-used keywords that were
6 used in at least one query in one or more previous searches”.

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9 Consequently, no art of record, either alone or in any combination,
10 anticipates or renders obvious at least the following elements in conjunction with
11 the other elements of their respective claims:

12 Claim 1: comparing the search terms to a history of search terms . . .
13 weighting each of the search terms according to whether a particular
14 search term is included in the history of search terms, a higher
15 weight being assigned to a search term that is included in the history
16 of search terms.

17 Claim 14: a history module that includes one or more historical keywords
18 that were previously used in the system in at least one query for one
19 or more searches . . . wherein the extraction module is further
20 configured to weight keywords according to whether or not the
21 keywords are included in the history module.

22 Claim 23: locating additional content that may be of interest to the user by
23 executing a search with one or more words indicated by the
24 annotation and one or more keywords derived from the context data
25 and from a keyword history list that includes previously-used

1 keywords that were used in at least one query in one or more
2 previous searches.

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5 For the reasons provided above, it is respectfully submitted that independent
6 claims 1, 14, and 23 are allowable. Moreover, although each of the pending
7 dependent claims also includes additional element(s) militating toward
8 allowability, they are allowable at least for the reasons given above in connection
9 with their respective independent claims.

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11 Accordingly, withdrawal of the § 103(a) rejections is hereby respectfully
12 requested.

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CONCLUSION

3 It is respectfully submitted that all of pending claims 1-4, 6-14, and 16-32
4 are allowable. Consequently, allowance of claims 1-4, 6-14, and 16-32 is hereby
5 respectfully requested.

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7 It is noted that two other documents accompany submission of the current
8 Reply. These two documents are: (1) a Request to Rescind the Finality of the
9 Previous Office Action and (2) a Request for an Examiner Interview. More
10 specifically, an "Applicant Initiated Interview Request Form" PTOL-413A is
11 being submitted herewith. **Applicants' representative requests that the**
12 **Examiner Interview occur prior to issuance of another Office Action.**
13 Applicants' representative will be available on a day and at a time of the
14 Examiner's convenience.

15 Respectfully Submitted,

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17 Date: 10/5/2006

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